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Service Information Bulletin

SUBJECT	DATE
Fuel Rail - Three-Filter System	February 2016

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0082	DD Platform - All Years	Removal of the Fuel Rail - Three-Filter System	Added basic safety steps. Added graphic for step 5. Changed links in step 6 and 7.
		Installation of the Fuel Rail - Three-Filter System	Added links to steps 3 and 12. Added graphic to step 11.



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2 Removal of the Fuel Rail - Three-Filter System

Remove as follows:



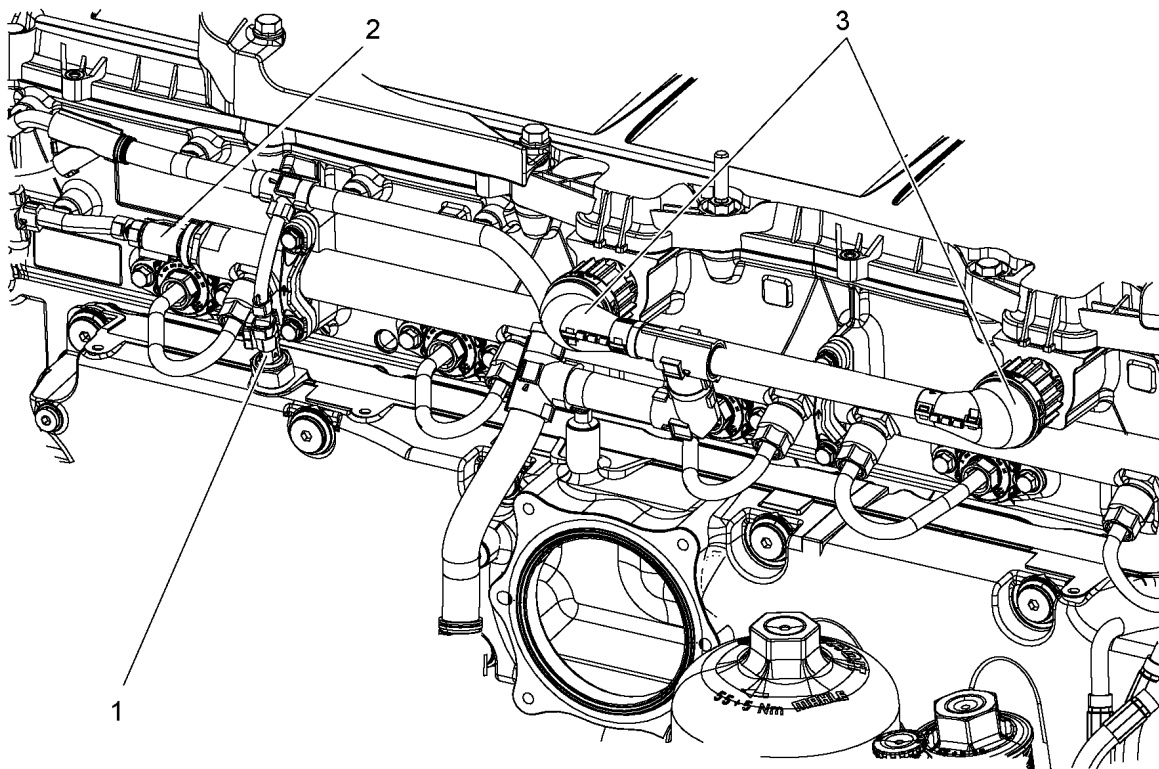
WARNING: FIRE HAZARD

Do not power wash or steam clean the engine bay in the area of vehicle electrical components, unless specified by vehicle manuals or service literature. Power washing/steam cleaning can permanently damage these components, which could result in fire, personal injury, or property damage.



To avoid injury from electrical shock, use care when connecting battery cables. The magnetic switch studs are at battery voltage.

1. Shut off the engine, apply the parking brake, chock the wheels, and perform any other applicable safety steps.
2. Disconnect the batteries. Refer to OEM procedures.
3. Open the hood.
4. Steam clean the engine.
5. Disconnect the electrical connectors on the fuel injector harness (3), fuel rail pressure sensor (2) and intake temperature sensor (1).



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**WARNING: PERSONAL INJURY**

To prevent the escape of high pressure fuel that can penetrate skin, ensure the engine has been shut down for a minimum of 10 minutes before servicing any component within the high pressure circuit. Residual high fuel pressure may be present within the circuit.

NOTICE: When removing the fuel rail feed tubes, cover the ends to ensure debris does not enter the tubes.

6. Remove the high pressure fuel injector lines with tool J-48770 and discard the high pressure fuel injector line seal. Refer to section "Removal of the High Pressure Fuel Injector Lines - Three-Filter System".

NOTICE: Engine size/model year specific service kits, containing all necessary parts to replace the high pressure fuel rail feed lines have been released. Refer to TS letter 14 TS 19Rev for the high pressure fuel line kit numbers to repair these engines.

7. Remove the high pressure fuel rail feed lines. Refer to section "Removal of the High Pressure Fuel Rail Feed Lines - Three-Filter System".
8. Remove the Pressure Limiting Valve (PLV) line from fuel rail. Refer to section "Removal of the Needle, Amplifier, and Pressure Limiting Valve Return Lines - Three-Filter System".
9. Remove the fuel rail bolts and clamps connecting the fuel rail to the camshaft housing and remove the fuel rail; discard the fuel rail clamps and bolts.

3 Installation of the Fuel Rail - Three-Filter System

NOTICE: DO NOT install any high pressure fuel line bolts and fittings using power tools. All bolts and fittings MUST be installed using hand tools.



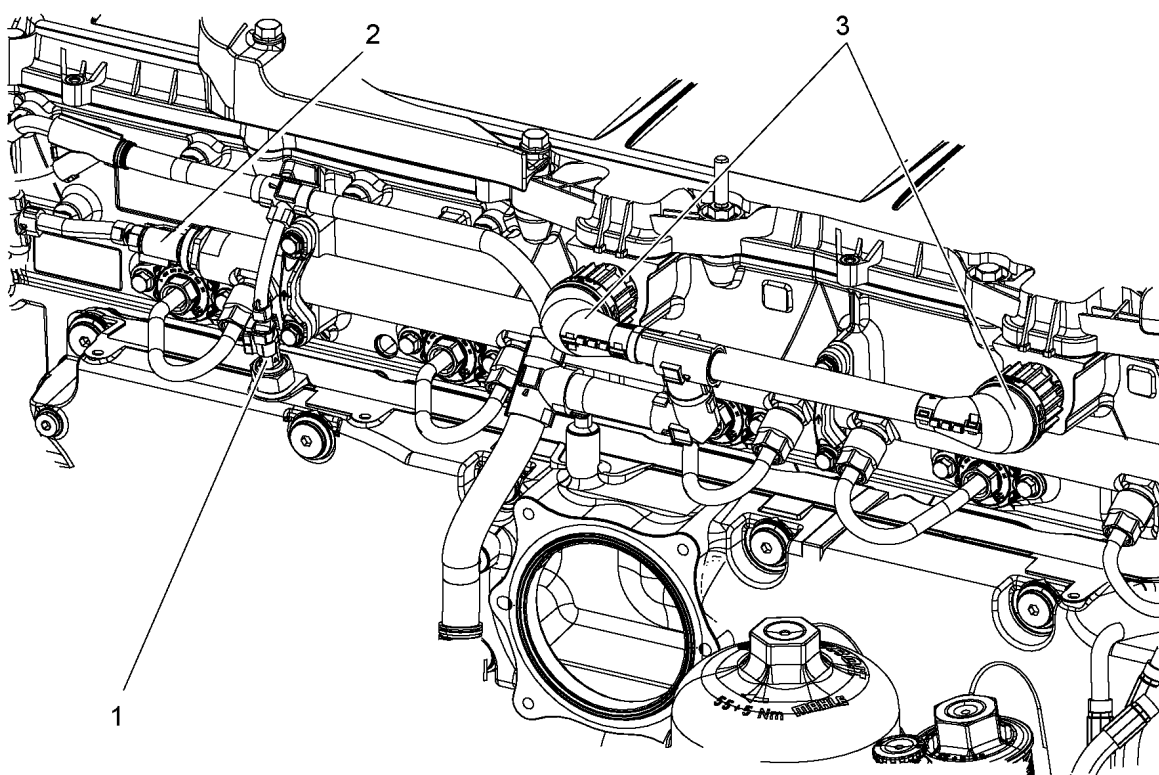
WARNING: PERSONAL INJURY

All hardware/components must be installed in the proper locations, and MUST be fastened to the specified torque. Failure to properly torque hardware/components will result in failure of a high pressure fuel feed line, resulting in possible fire and/or personal injury.

Install as follows:

NOTICE: Fuel rail clamp bolts are single-use items and cannot be reused.

1. Install fuel rail to camshaft frame with three new clamps and six new fuel rail bolts; hand-tighten bolts.
2. Using tool J-48770, install the high pressure fuel injector lines to the fuel rail and fuel injectors with new high pressure fuel injector line seals. Refer to section "Installation of the High Pressure Fuel Injector Lines - Three-Filter System". Hand-tighten the high pressure fuel injector lines.
3. Install Pressure Limiting Valve (PLV) fuel return line to the fuel filter module and fuel rail with tool J-48770 and hand-tighten. Refer to section "Installation of the Needle, Amplifier, and Pressure Limiting Valve Return Lines - Three-Filter System".
4. Torque new fuel rail clamp bolts to 14 N·m (120 lb·in.).
5. Torque the high pressure fuel injector line seal bolts to 15 N·m (11 lb·ft).
6. Torque the high pressure fuel injector lines to 40 N·m (30 lb·ft).
7. Torque the Pressure Limiting Valve (PLV) banjo bolt to 35 N·m (26 lb·ft).
8. If removed, install the fuel rail pressure sensor; torque to 65 to 70 N·m (48 to 52 lb·ft) and then install connector.
9. If removed, install PLV and torque to 100 N·m (74 lb·ft)
10. Connect the electrical connectors on the fuel injector harness (3), fuel rail pressure sensor (2), and intake temperature sensor (1).



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NOTICE: The high pressure fuel rail feed lines, vibration dampers, mounting bracket and hardware are one-time use components and **MUST** be replaced any time they are removed.



WARNING: PERSONAL INJURY

All parts provided with this kit, and those they are replacing on the engine, function as a complete system and are single-use items. The old parts cannot be reused. Reusing parts or failing to use all new parts contained in the kit may result in the failure of high pressure fuel lines, possibly resulting in a fire.

11. Install the new high pressure fuel rail feed lines on to the high pressure pump and fuel rail.
 - Refer to section "Installation of the DD13 High Pressure Fuel Rail Feed Lines - Three-Filter System".
 - Refer to section "Installation of the DD15 and DD16 High Pressure Fuel Rail Feed Lines - Three-Filter System".